CLAIMS

What is claimed is:

1. A golf ball with a plurality of dimples having an aerodynamic coefficient magnitude defined by $C_{mag} = \sqrt{(C_L^2+C_D^2)}$ and an aerodynamic force angle defined by Angle = $\tan^{-1}(C_L/C_D)$, wherein C_L is a lift coefficient and C_D is a drag coefficient, wherein the golf ball comprises:
a first aerodynamic coefficient magnitude from about 0.24 to about 0.27 and a first aerodynamic force angle of about 31 degrees to about 35 degrees at a Reynolds Number of about 230000 and a spin ratio of about 0.085; and
a second aerodynamic coefficient magnitude from about 0.25 to about 0.28 and a second aerodynamic force angle of about 34 degrees to about 38 degrees at a Reynolds Number of about 207000 and a spin ratio of about 0.095; and a third aerodynamic coefficient magnitude from about 0.26 to about 0.29 at a Reynolds Number of about 184000 and a spin ratio of about 0.106.

2. The golf ball of claim 1, further comprising:
a fourth aerodynamic coefficient magnitude from about 0.27 to about 0.30 at a Reynolds Number of about 161000 and a spin ratio of about 0.122.

3. The golf ball of claim 2, further comprising:
a fifth aerodynamic coefficient magnitude from about 0.29 to about 0.32 at a Reynolds Number of about 138000 and a spin ratio of about 0.142; and
a sixth aerodynamic coefficient magnitude from about 0.32 to about 0.35 at a Reynolds Number of about 115000 and a spin ratio of about 0.170.

4. The golf ball of claim 3, further comprising:
a seventh aerodynamic coefficient magnitude from about 0.36 to about 0.40 at a Reynolds Number of about 92000 and a spin ratio of about 0.213; and
an eighth aerodynamic coefficient magnitude from about 0.40 to about 0.45 at a Reynolds Number of about 69000 and a spin ratio of about 0.284.

5. The golf ball of claim 1, wherein the aerodynamic coefficient magnitudes vary from each other by about 6 percent or less at any two axes of ball rotation.

6. The golf ball of claim 1, wherein the aerodynamic coefficient magnitudes vary from each other by about 3 percent or less at any two axes of ball rotation.

7. The golf ball of claim 1, wherein the plurality of dimples cover about 80 percent or greater of the ball surface.

8. The golf ball of claim 1, wherein at least 80 percent of the dimples have a diameter greater than about 6.5 percent of the ball diameter, and wherein the dimples are arranged in an icosahedron or an octahedron pattern.

9. The golf ball of claim 1, wherein the dimples have at least three different dimple diameters.

10. The golf ball of claim 1, wherein at least 10 percent of the dimples have a shape defined by catenary curve.

11. The golf ball of claim 4, comprising at least one core and at least one cover layer, wherein at least one of the layers comprises polyurethane.

12. A golf ball with a plurality of dimples having an aerodynamic coefficient magnitude defined by $C_{mag} = \sqrt{(C_L^2+C_D^2)}$ and an aerodynamic force angle defined by Angle = $\tan^{-1}(C_L/C_D)$, wherein C_L is a lift coefficient and C_D is a drag coefficient, wherein the golf ball comprises:
a first aerodynamic coefficient magnitude from about 0.24 to about 0.27 at a Reynolds Number of about 230000 and a spin ratio of about 0.085; and
a second aerodynamic coefficient magnitude from about 0.25 to about 0.28 at a Reynolds Number of about 207000 and a spin ratio of about 0.095; and a third aerodynamic coefficient magnitude from about 0.26 to about 0.29 at a Reynolds Number of about 184000 and a spin ratio of about 0.106.

13. The golf ball of claim 12, further comprising:
a fourth aerodynamic coefficient magnitude from about 0.27 to about 0.30 at a Reynolds Number of about 161000 and a spin ratio of about 0.122.

14. The golf ball of claim 12, further comprising:
a first aerodynamic force angle of about 31 degrees to about 35 degrees at a Reynolds Number of about 230000 and a spin ratio of about 0.085.

15. The golf ball of claim 12, further comprising:
a second aerodynamic force angle of about 34 degrees to about 38 degrees at a Reynolds Number of about 207000 and a spin ratio of about 0.095.

16. The golf ball of claim 12, wherein the aerodynamic coefficient magnitudes vary from each other by about 6 percent or less at any two axes of ball rotation.

17. The golf ball of claim 12, wherein the plurality of dimples cover about 80 percent or greater of the ball surface.